

or an array in the two dimensional manner on a surface of a biochip.

This feature CONCLUSIVELY DIFFERS from OGINO's system.

In regard to Claim 36, the biochip reader of Ogino also includes an image intensifier 30 which separates the spectroscopic information from noise using the spectra and regression method. At the same time, though the image intensifier can amplify optical signals, this is the photoelectric conversion element, as a result of two dimensional photo signal is not corresponding to the two dimensional electron signals in a precise sense.

In contrast, the instant invention discloses the CCD devices or photodiode array as the two dimensional optical detectors, and can also use the camera as the image detector. Accordingly, our invention is completely different from Ogino.

In regard to claim 37, Ogino teaches a slit or aperture 68. Ogino discloses that the basic arrangement of this embodiment 1 or 7 in FIG. 10, col. 8, line 53, the features of this embodiment lie in the following points:

(1) the sample liquid flow is a flat flow 64, instead of a circular flow;

(2) The light receiving element for detecting the fluorescent spectral image is a two dimensional image sensor 70, instead of a one dimensional image sensor; and

(3) the slit is a rectangular slit 68 broad (wide) in the lateral direction, instead of the circular direction.

Since the above described rectangular slit is for lateral

slit light beam. Clearly, this differs from applicant's invention.

Claims 33-38 were rejected under Sec 102 as being "anticipated" by Kauvar 6,492,125. Applicant respectfully traverses the Examiner's rejection as being without adequate foundation.

The Examiner alleges that Kauvar discloses use of a grating together with the Fourier spectromometer. Although Kauvar uses a Fourier spectrometer, he does not disclose use of a grating. In the Fourier spectrometer, the "interferogram" signal is detected which happens by interference between optical paths. To analyze this interferogram, spectroscopic information are derived. Thus, this is not use of a grating and our invention differs from Kauvar.

Regarding claim 35, the Examiner points out that the apparatus of FIG. 1 of Kauvar comprises a scanning confocal microscope for fluorescence measurements. However, Kauvar does not teach a confocal optical system.

Regarding claim 36 and 37, Kauvar only teaches about Fourier transform techniques to recognize the underlying shape despite any distortions in its directly observed form. This is not disclosed in the operation of the optical system.

Clearly, our invention differs from Kauvar.

Regarding claim 38, Kauvar teaches a biochip formed from a transparent substrate to allow passage of the excitation light and the fluorescent light, wherein the excitation light is irradiated from the bottom side of the biochip opposite the top side on which the plurality of samples are disposed (See. fig. 1).

However, in FIG. 1 of Kauvar, sample is put on the XYZ microscope Stage and a white light from ARC Lamp irradiates the sample. This is not to irradiate transparent light to the sample. Rather, it irradiates from above the sample. As a result, Kauvar does not disclose the transparent light to the sample

As stated, Kauvar only discloses the Fourier transform technique to recognize the underlying shape despite any distortion in its directly observed form, in col. 8, line 20.

THERE IS NO MENTION MADE OF ANY GRATING.

As something called a grating, Kauvar only notes generally "In general, separate detectors may be employed using appropriate filters or other means, such as a prism or grating, to permit a single detector to perceive separately multiple signals, such as different wavelength ranges" in col. 2, line 63.

In view of the foregoing, clearly our recited invention is NOT anticipated by either Ogino or Kauvar. The principles of our invention are completely different from those of the cited references. Accordingly, allowance is respectfully solicited.

respectfully

M KOJIMA

ATTACHED: APPENDIX 1,2 CLAIMS

MOONRAY KOJIMA
BOX 627 WILLIAMSTOWN, MA 01267
Tel (413)458-2880